Copy Art. 19

AMENDED CLAIMS [received by the International Bureau on 10 November 2004 (10.11. 04) original claims 1, 32,40 and 52 amended WHAT IS CLAIMED IS: 1. An isolated nucleic acid which encodes a cancer cell antigen and which comprises a sequence selected from the group consisting of : (a) the nucleodde sequence of any one of SEQ ID NOs : 1,2, 6, 9, 11, 14, 16, 20, 21, 23, 28, 37, 38, 39, 41, 43, and 44 ; (b) a nucleoride sequence encoding SEQ ID NO : 22, 32, 40, or 42; and (c) a nucleotide seqvence complemensary to (a) or (b).

2. The isolated nucleic acid of claim 1, wherein the cancer cell antigen comprises one or more MHC class I binding epiiopes.

3. The isolated nucleic acid of claim 1, wherein the cancer cell antigen has a capability to elicit cytoioxic T cell lysis, 4. An isolated nucleic acid comprising a nucleic acid sequence that is at least 70% identical to The sequence of the nucleic acid of claim 1, and which encodes a cancer cell antigen comprising one or mort class I binding epitopes.

S. The isolated nucleic acid of claim 4, wherein the nucleic acid sequence is at least 90% identical to the sequence of the nucleic acid of claim 1.

6-The isolated nucleic acid of claim 4, wherein the cancer cell antigen has a capability to elicit cyfoioxic T cell lysis.

7. An isolated nucleic acid encoding a cancer antigen comprising one or more MHC class I binding epitopes, which nucleic acid hybridizes to the complement of the nucleic acid of claim 1 under the following stringent conditions: a final wash in 0. IX SSC at 65°.

8. The isolated nucleic acid of claim 7, wherein the cancer cell antigen has a capability to elicit cytoioxic T cell lysis.

28. The vaccine of claim 27, wherein the one or more MHC-binding epitopes are selected from the group consisting ofanHLA-A0201 binding epitop, an HLA-24 binding epitope, an HLA-A3 binding epitop, an HUA-AU binding epitop, an HLA-B7 binding epitome, and combinations thereof.

29. The vaccine of claim 28, wherein the antigen comprises SEQ ID NO:22, or MHC class I binding ng fragment thereof.

30. The vaccine of claim 26, father comprising a capability to elicit a humoral or cytotoxic T lymphocyte response to the antigen- 31. A method for treating cancer, which comprises admmisiering to a subject in need thereof a'vaccine comprising a therapeutically effective amount of a vaccine of claim 26.

32. The method of claim 31, wherein the vaccine is administered in combination with a chemotherapemie agent.

33. A monoclonal 1 antibody or antigen binding fragment thereof, which specifically binds to the antigen of claim 21.

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34. The monoclonal antibody of claim 33 which is a chimeric, human, or humanized antibody.

35. diagnostic reagent comprising an antibody or antigen binding ding fragment of claim 33 and a detectable label, 36. A therapeutic reagent computing an antibody or antigen binding fragment of claim 33 and an effector moiety bound.

37. The therapeutic reagent of claim 36, wherein the effector moiety is a radionuclide, an enzyme, a cytotoxin, a growth factor, or a drug.

38. A method for treating cancer, which comprises administering to a subject in need thereof a herapeutically effective amount of an antibody or antigen binding fragment of claim 33.

39 The method of claim 38, wherein the antibody is administered in combination with a chemotherapeutic agent.

40. A method for treating cancer, which comprises administering to a subject in need thereof a therapeutically effective amount of a therapeutic reagent of claim 36.

41. The method of claim 40, wherein the therapeutic reagent is administered m combination with a chemotherapeutic 49cnt.

42. A monoclonal antibody or antigen binding fragment Thereof thai specifically binds Anat-2 antigen- 43. The monoclonal antibody of claim 42 which is a chimeric, hua, or humanized antibody.

44. A diagnostic reagent comprising an antibody or antigen binding fragment of claim 42 and a detectable label.

45. A therapeutic reagent compnsing the monoclonal antibody or antigen binding fragment of claim 42 and an effector moiety.

46. The Therapeutic reagent of claim m 45, wherein the effector moiety is a radionuclide, an enzyme, a cytotox. in, a growth factor, or a drug.

47. The therapeutic reagent of claim 46, wherein the radionuclide is 90Y or 1311.

48. The monoclonal antibody or antigen binding fragment of claim 42, which does not specifically bind to Agnat-1, Anar-3 or Anal-4.

49. A method of treating cancer comprising administering to a subject in need thereof a rherapeutically effective amount of the antibody or antigen binding fragment of claim 42.

50. The method of claim 49, wherein the antibody is administered in combination with a chemotherapeutic agent.

51. A method of treating cancer comprising administering to a subject in need thereof a therapemicaUy effective amounT of the therapeutic reagent of claim 45.

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52. The method of claim 51, wherein the therapeutic agent is administered in combination with a chemoiherapeulic agent-

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